

Appl. No. : 09/836,674
Filed : April 16, 2001

REMARKS

Applicants respectfully request the Examiner to reconsider the above-captioned application in view of the above amendments and the following remarks.

Matters of Form

Claims 1-5, 7-13, 16-18 and 21-26 stand rejected under 35 U.S.C. 112, first paragraph and second paragraph, as specified in paragraphs 2, 3 and 6 of the outstanding Final Office Action. While Applicants respectfully disagree with the grounds for rejecting these claims, Applicants have amended Claims 1 and 36 as discussed below. Applicant reserve the right to pursue Claims 1 and 36 in their previous or similar form in a continuing application.

As amended, Claims 1 and 36 recite, in part, (i) "said pre-reaction chamber being aligned downstream with said reaction chamber and having a single outlet that is directly connected with ~~configured such that all the reactant gas entering the pre-reaction chamber is transferred to~~ said reaction chamber" (Claim 1) and (ii) "an independent pre-reaction chamber ~~that is configured~~ has a single outlet that is directly connected with ~~such that all the reactant gas entering the pre-reaction chamber is transferred to~~ said reaction chamber" (Claim 36). (Language added in this amendment indicated by underling and language removed in this amendment indicated by ~~striketrough~~). This amendment is supported by Figure 1 and 2 of the accompanying description of these Figures in the Specification.

Claim 20

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suntola et al (USPN 6,015,590) in view of Lan et al. (USPN 4,780,174 or Lofgren et al. (USPN 6,092,253). Applicants respectfully traverse the rejection of this claim.

Suntola disclosed stacked reaction chambers 13 that were arranged in parallel. Col. 9, lines 24-27. This arrangement allowed the flow in the in-flow channels to be distributed evenly between the reaction cambers. *Id.* Suntola states that the "flow path through each reaction chamber must have a conductance which is equivalent (equal) to that of the gas paths of the other chambers." Col. 9, lines 29-32. With these reaction chambers, Suntola sought to provide a balanced pressure and

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flow rate between the individual reaction chambers 13 and to promote equal film growth in the separate chambers. Col. 9, lines 32-35.

The Examiner admits that Suntola does not teach a removable media that is a separate element from the walls of the reaction chamber. Accordingly, the Examiner argues that “it would be obvious to modify Suntola et al by arranging at least two substrates in series in a reaction chamber to increase growth rate” as taught by Lofgren and Lan. The Examiner argues that Suntola suggests such a modification because Suntola teaches that each reaction chamber can be used for processing at least two substrates.

Applicant respectfully disagrees with the Examiner’s arguments. In searching for motivation to combine references, it is impermissible to “pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art.” Bausch & Lomb v. Barnes-Hind/Hydrocurve, 230 U.S.P.Q. 416, 419 (Fed. Cir. 1986) (quoting In re Wesslau, 147 U.S.P.Q. 91, 393 (C.C.P.A. 1965)). The reference must be considered as a whole, giving due weight to the reference’s portions arguing against or teaching away from the claimed invention. Bausch & Lomb, 230 U.S.P.Q. at 42.

In this case, the Examiner is ignoring the express teaching in Suntola to provide a balanced pressure and flow rate between the individual reaction chambers 13 and to promote equal film growth in the separate chambers. As noted by the Examiner, each reaction chamber in Suntola includes two opposing substrates 12. However, noticeably each substrate is located an equal distance from the gas flow channels 7, 4. To modify Suntola as suggested by the Examiner such that the substrates are in series, would go against the express goal of Suntola which was to promote equal film growth in the reaction chambers. In addition, Suntola already addressed the issue of increased growth rate by arranging the reactors in parallel such that several substrates could be processed at the same time. .

Thus, there is no suggestion in the references to modify the Suntola as suggested by the Examiner because (i) to do so would compromise a specific goal as identified by Suntola and (ii) the reaction chamber design of Suntola already addressed the concern of processing multiple substrates at the same time.

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Please note that a typographical error was corrected in Claim 20. Specifically, "media" was replaced with "medium" in the last paragraph.

Terminal Disclaimer

Claims 1-5, 7-13, 16-18, 20-16 and 36 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,506,352. Applicant respectfully disagrees with this rejection. Nevertheless, to advance prosecution, Applicant has submitted with this amendment a Terminal Disclaimer, which is in compliance with 37 CFR 1.321.

CONCLUSION


For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicants' attorney in order to resolve such issue promptly.

Respectfully submitted,

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